

APPENDIX

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[0011]

[MEANS FOR SOLVING THE PROBLEM]

The present invention was implemented in order to achieve the object. An invention according to Claim 1 provides an information recording medium, wherein a heat-sensitive recording layer in which a coloring layer, a deposited anchor layer, a metal thin-film layer having a film thickness of 500 to 1,200 nm and an infrared absorbent layer having no absorption in a visible region are multilayered on a substrate is provided on one or both surfaces of a core sheet, a transparent overcoat sheet is provided on the core sheet, and the infrared absorbent layer records information by removing part of the metal thin-film layer using heat generated by the absorption of near infrared or infrared ray irradiated through the transparent overcoat sheet.

[0013] An invention according to Claim 3 is characterized in that a multilayer coherent thin film is provided on the coloring layer in the information recording medium according to Claim 1.

[0022] As the coloring layer 6 may be used ink including any arbitrary coloring agents of black, blue, green, red and the like. It is desirable that there be no absorption in the infrared region to avoid any unfavorable temperature rise because gas possibly generated by heating causes swelling in a printing part of the heat-sensitive recording layer. The ink is printed on or applied to a required portion of the substrate 5 by any of the conventional formation methods, which are printing methods such as screen print, offset print and gravure print, and coating methods such as gravure coat, roll coat and bar coat, and thereafter dried so that the

coloring layer 6 is formed.

[0025] The multilayer coherent thin film 12 has a structure where a high-refractivity ceramic thin film layer 22 and a low-refractivity ceramic thin film layer 23 are alternately provided.

[0047] The information was recorded on the produced card using YAGE laser having the wavelength of 1,067 nm, beam diameter of 100 μm , and output of 6 W at the scan speed of 40 mm/sec. The irradiated laser beam was absorbed by the colorless infrared absorbent layer without posing any thermal impact on the overcoat sheet made of transparent vinyl chloride resin, and heat thereby generated caused the deposited thin film to ball up. As a result, the ground coloring layer emerged.